

NEW SPECIES OF NORTH AMERICAN HELICHUS

(DRYOPIDÆ, COLEOPTERA)

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The species herein described belong to the *productus* Lec. group of the genus, that is, species having the apical ventral segment densely pubescent. Separation of the species in this genus is rather difficult on account of the great similarity in form and sculpture of the various members. However, examination of the male genitalia offers a rather reliable means of separating the species and in the future should be figured in connection with the description of new species. The figures were drawn with the aid of a camera lucida. The first four are magnified equally, and the fifth, E, is not as highly magnified.

HELICHUS PRODUCTUS Lec.

(Pl. 1, fig. A)

Le Conte, J. L., Proc. Acad. N. S. Phila., VI. p. 43, 1852

Examination of numerous specimens of this species from various localities in California shows that there is some variation in the degree of dilation of the apices of the lateral lobes of the male genitalia. The specimen figured was taken at Mokelumne Hill, Calaveras Co.

Helichus thoracicus Hinton, new species

(Pl. 1, fig. B)

Moderately elongate, subparallel, rather robust; moderately densely clothed above with short, recumbent brownish hairs; black, shining; antennæ dark-testaceous, tarsi piceous.

Head with a small, shallow impression on vertex, finely, densely punctate and with fine, moderately dense granules anteriorly.

Prothorax four-fifths as long as wide, evenly convex, sides slightly arcuate, sinuate before hind angles; disk moderately coarsely, moderately densely punctate, with much finer punctures intermixed throughout, base and sides finely, sparsely, irregularly granulate.

Elytral disk with the striæ shallowly impressed and coarsely, moderately closely punctate; intervals flat, finely, moderately sparsely punctate, outer intervals very finely, moderately densely

granulate; scutellum subovate, base broadly arcuate, finely, sparsely punctate.

Beneath minutely, moderately densely granulate and clothed throughout with short, recumbent, brownish hairs; apical ventral segment densely pubescent. Lateral lobes of male genitalia slender at apex; tegmen very wide, very broadly rounded at apex. Length 7-7.5 mm.; breadth, 3 mm.

The type, a male, in collection of the writer, and four paratypes were collected by R. L. Usinger and the writer at La Venta, Mexico, D. F., on July 18, 1933, at an elevation of about 8,000 feet. Four additional paratypes were collected at Pueblo, Mexico. Three paratypes are deposited in the collection of the U. S. National Museum and the remainder in the collection of the writer.

In three of the paratypes from Pueblo, the prothorax is slightly declivous before the base. Its much coarser prothoracic punctation will serve to readily separate it from *H. productus* Lec. The coarser punctation approaches that of *H. puncticollis* Sharp.

Helichus propinquus Hinton, new species

(Pl. 1, fig. C)

Moderately elongate, subparallel, rather robust; moderately densely clothed above with short, recumbent, brownish hairs; black, shining; antennæ dark testaceous, tarsi dark piceous.

Head slightly depressed on vertex, finely, densely punctate, anteriorly and at sides somewhat rugulosely punctate and sparsely, minutely granulate.

Prothorax about four-fifths as long as wide, evenly convex, sides arcuate, sinuate before hind angles; disk finely, densely punctate, with finer punctures intermixed throughout, sides and base finely, moderately sparsely granulate and extremely finely, densely punctate.

Elytral disk with the striæ shallowly impressed and moderately coarsely, closely punctate; intervals flat, near suture sparsely, microscopically punctate, elsewhere minutely, moderately densely granulate; scutellum subovate, base broadly arcuate, finely moderately densely punctate.

Beneath minutely, moderately densely granulate and clothed throughout with short, dense, recumbent, pale hairs; apical ventral segment densely pubescent. Lateral lobes of male genitalia with the apices stout, somewhat triangular and slightly hooked; tegmen very slender and acute at apex. Length, 6.5-8.5 mm.; breadth, 2.8-3.8 mm.

The type (No. 3975, Mus. Calif. Acad. Sci., Ent.) and numerous paratypes were collected by J. R. Slevin at Sierra Laguna, Lower California, Mexico, on August 15, 1919. Seven paratypes are deposited in the collection of the writer, one in the collection of Professor P. N. Musgrave, and the remainder in the collection of the California Academy of Sciences. The writer is indebted to the California Academy of Sciences for the opportunity of studying this species.

From *H. thoracicus* Hntn. it differs in not having the coarse prothoracic punctation. *H. propinquus* is very close to *productus* Lec., but it may be separated from the latter by having the apex of the tegmen slender and acutely pointed instead of rather wide and broadly rounded. In *H. propinquus* the apices of the lateral lobes are very stout, somewhat triangular, and slightly hooked, whereas in *H. productus* Lec. they are, in the series before me, never as stout and never hooked.

Helichus musgravei Hinton, new species

(Pl. 1, fig. D)

Moderately elongate, subparallel, rather robust; clothed above with short, moderately dense, brownish hairs; black, shining; antennæ dark testaceous, tarsi piceous.

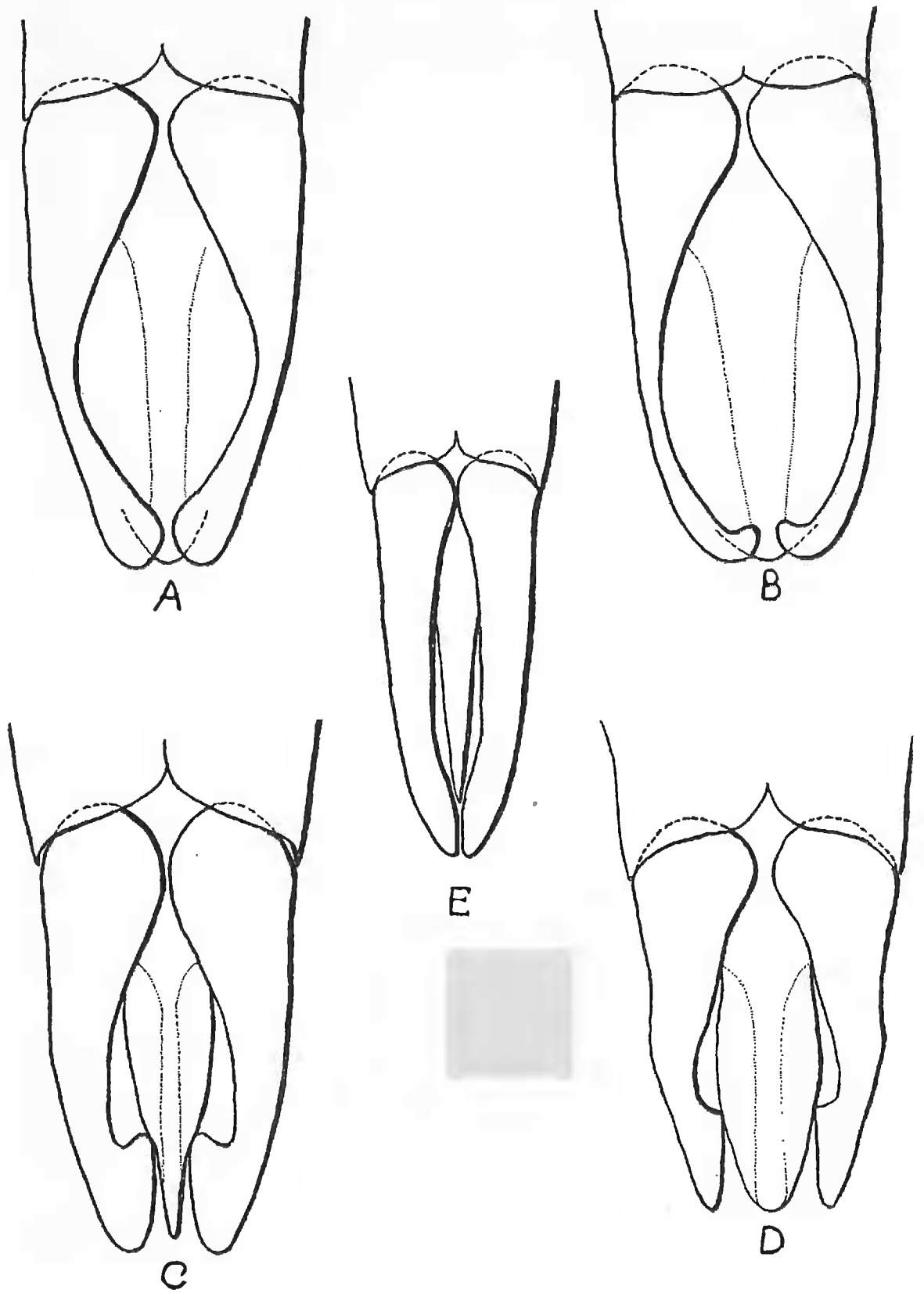
Head moderately finely, densely and confluent punctate.

Prothorax four-fifths as long as wide, evenly convex, sides moderately arcuate, sinuate before hind angles; disk moderately finely, densely punctate, with finer punctures intermixed throughout, more sparsely punctate anteriorly and finely, densely punctate at sides and base.

Elytral disk with the striæ coarsely and moderately closely punctate; intervals flat, near suture finely, moderately densely punctate, elsewhere minutely, moderately densely granulate; scutellum subovate, base broadly arcuate, finely, sparsely punctate.

Beneath moderately densely, minutely granulate and densely clothed throughout with short, recumbent, somewhat testaceous hairs; apical ventral segment densely pubescent. Lateral lobes of male genitalia with the apices slender, elongate and distinctly triangular. Length, 6.2 mm., breadth, 2.8 mm.

The type, a male deposited in the collection of the U. S. National Museum, and numerous paratypes were taken by R. L. Usinger and the writer at Real de Arriba, District of Temascaltepec, Mexico, in May, June, and July 1933, at an elevation of



- A. *Helichus productus* Lec.
- B. *Helichus thoracicus* Hntn.
- C. *Helichus propinquus* Hntn.
- D. *Helichus musgravei* Hntn.
- E. *Helichus confluentus* Hntn.

6,000-7,000 feet. Additional paratypes were taken at Tejupilco, in June at an elevation of 4,000 feet. Paratypes are deposited in the collection of Professor P. N. Musgrave, for whom I take great pleasure in naming this species.

The punctation of the prothorax is somewhat coarser than that of *H. productus* Lec., but it is not as coarse as that of *H. thoracicus* Hntn. The apices of the lateral lobes are triangular but much more slender than those of *H. propinquus* Hntn.; and the apex of the tegmen is not slender and acute, but it is wide and broadly rounded as in *H. productus* Lec. and *H. thoracicus* Hntn.

Helichus confluentus Hinton, new species

(Pl. 1, fig. E)

Moderately elongate, subparallel, rather robust; moderately densely clothed above with short, recumbent, pale hairs; black, shining; antennæ dark testaceous, tarsi piceous.

Head slightly depressed on vertex, finely, densely punctate and minutely, sparsely granulate.

Prothorax four-fifths as long as wide, evenly convex, sides slightly arcuate, sinuate before hind angles; disk finely, rather densely punctate, with extremely fine, very dense punctures intermixed throughout, sides and base finely, moderately sparsely granulate and also punctate with extremely fine, dense punctures.

Elytral disk with the striæ shallowly impressed and coarsely, moderately closely punctate; intervals flat, near suture sparsely, minutely granulate, finely, irregularly and densely, microscopically punctate, elsewhere minutely, moderately densely granulate; scutellum subovate, base broadly arcuate, finely, sparsely punctate and sparsely granulate.

Beneath minutely, moderately densely granulate and clothed throughout with short, dense, recumbent, pale-testaceous hairs; apical ventral segment densely pubescent. Male genitalia flattened dorso-ventrally, lateral lobes rather straight, slender at apex; tegmen rather short, narrow and acutely pointed at apex. Length, 6.6 mm.; breadth, 3 mm.

The type (No. 3976, Mus. Calif. Acad. Sci., Ent.) and two paratypes were taken by E. G. Linsley at Cave Creek, Chiricahua Mts., Arizona, on July 3, 1932.

The flattened male genitalia will separate this from the species having the apical ventral segment densely pubescent. The structure of the male genitalia is intermediate in form between that of the *H. productus* Lec. and *H. lithophilus* Germ. groups of the genus.